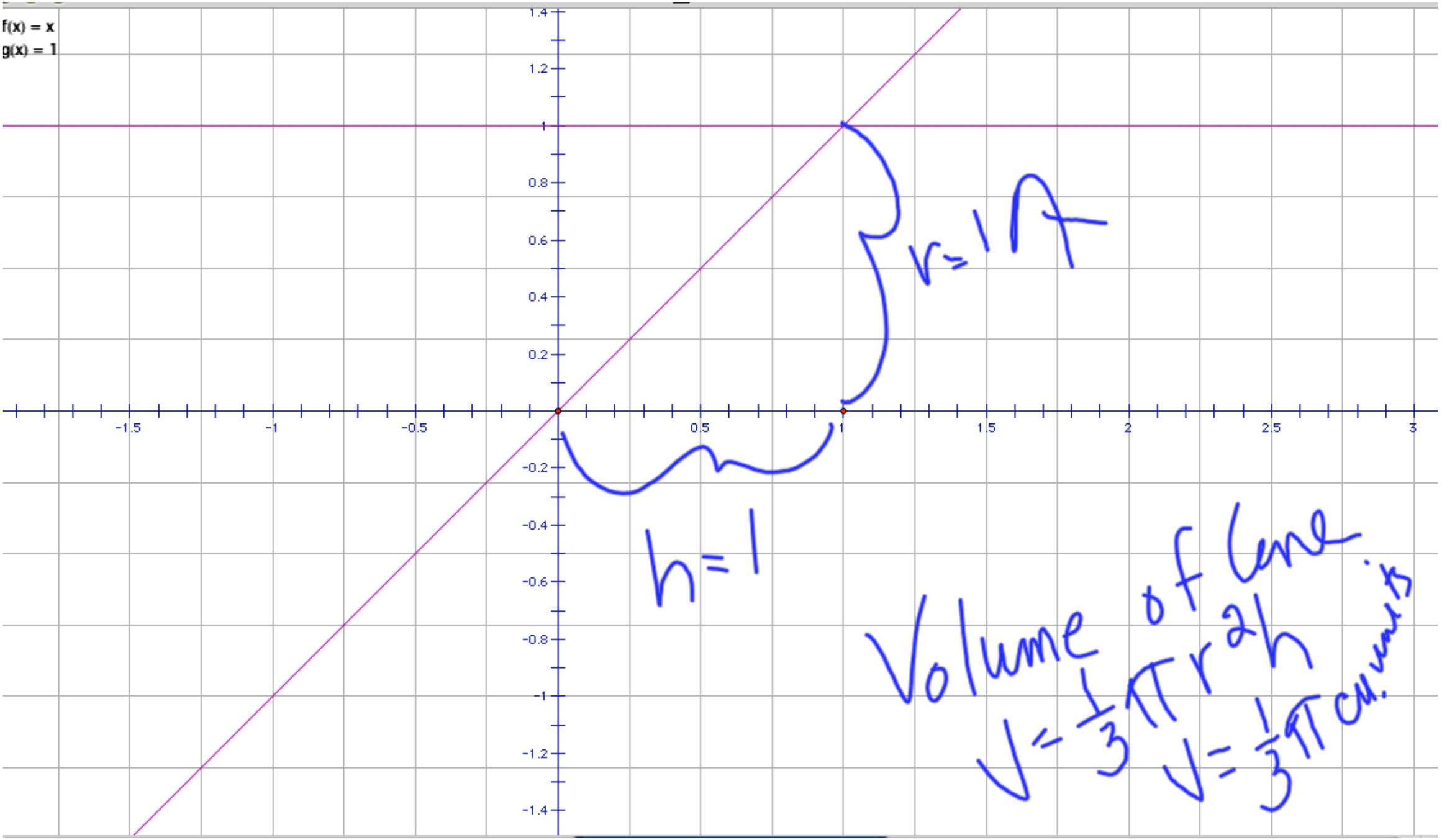

f(x) = x
g(x) = 1
r = 1 ft
h = 1
Volume of Cone
$V = \frac{1}{3}\pi r^2 h$
$V = \frac{1}{3}\pi$ cu. units

Sketchpad File Edit Display Construct Transform Measure Graph Window Help (Charged)

Untitled

Untitled 2

f(x) = x
g(x) = 1

Cylinder
$V = 2\pi r^2 h$

$V = 2\pi$ cu units

$r = 1$

$h = 1$

Volume of Cone
$V = \frac{1}{3}\pi r^2 h$
$V = \frac{1}{3}\pi$ cu. units

f(x) = x
g(x) = 1

Volume of Cylinder

$V = 2\pi r^2 h$

$V = 2\pi$ cu units

$r = 1$

$h = 1$

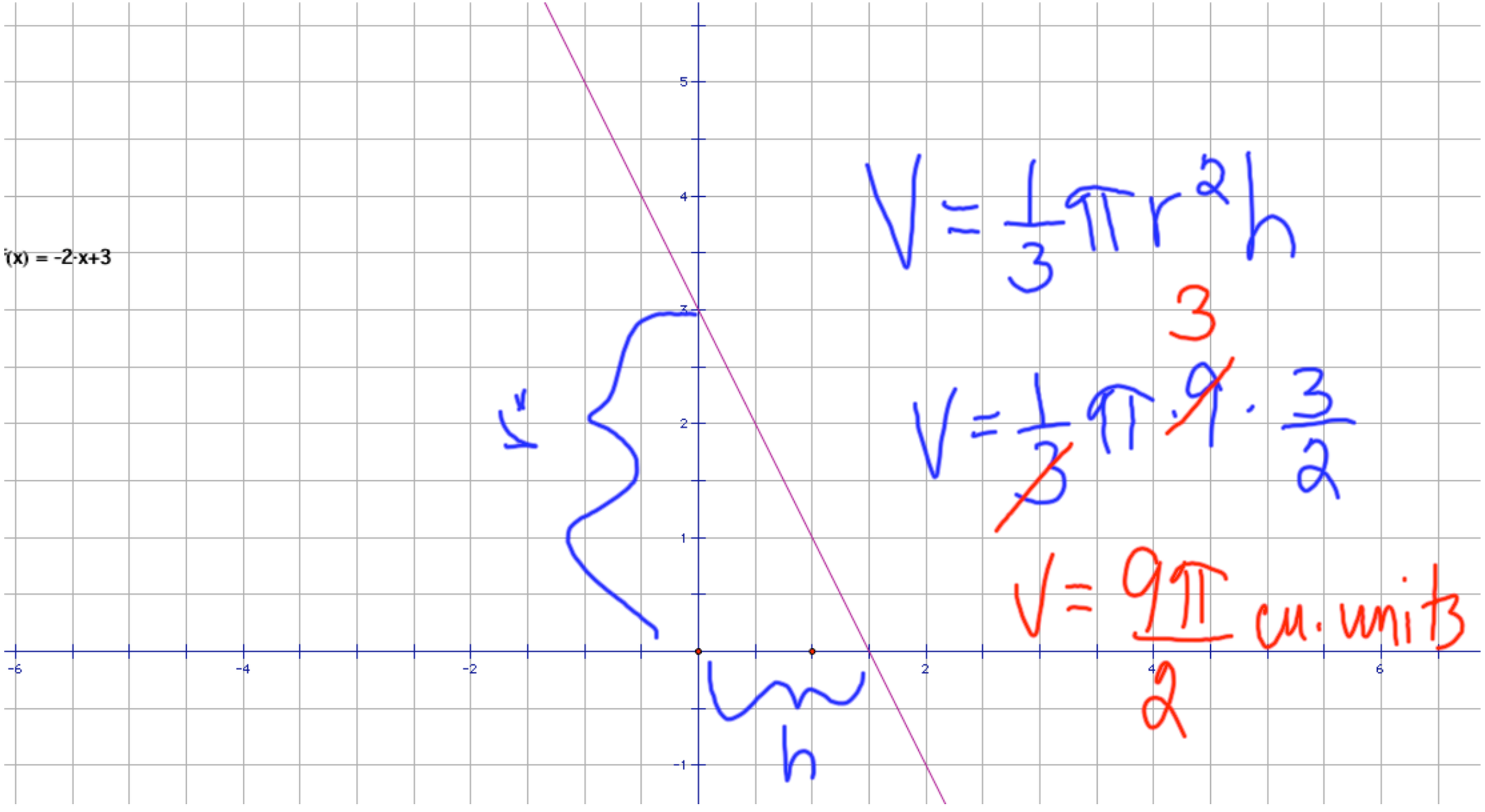
Volume of Cone

$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\pi$ cu units

$$\text{Total Vol.} = 2\pi - \frac{1}{3}\pi = \frac{6\pi}{3} - \frac{1}{3}\pi$$

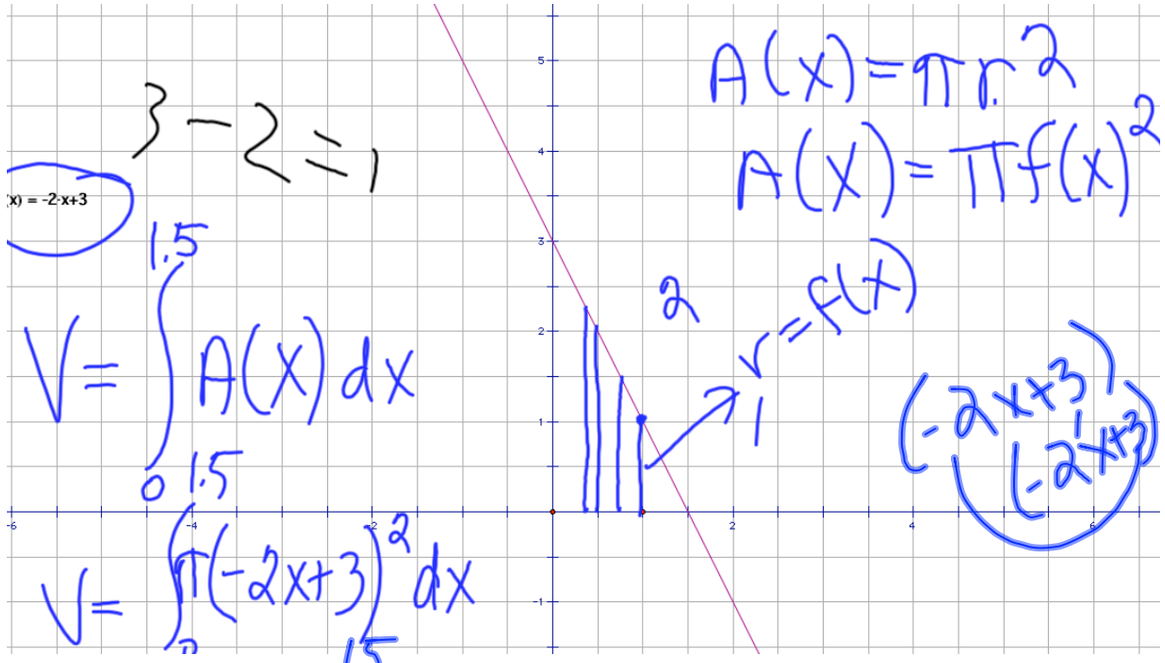
$$= \frac{5}{3}\pi \text{ cu. units}$$



$$V = \frac{1}{3}\pi r^2 h$$

$$V = \frac{1}{3}\pi \cdot 9 \cdot \frac{3}{2}$$

$$V = \frac{9\pi}{2} \text{ cu. units}$$



$3-2=1$

$A(x)=\pi r^2$

$A(x)=\pi f(x)^2$

$r=f(x)$

$(-2x+3)(-2x+3)$

$$V=\int_0^{1.5} A(x)\,dx$$

$$V=\int_0^{1.5} \pi(-2x+3)^2\,dx$$

$$V=\pi * \int_0^{1.5} (4x^2-12x+9)\,dx$$

$$V=\pi\left(\frac{4}{3}x^3-6x^2+9x\right)\Big|_0^{1.5}$$

$$V=\pi\left(\frac{4}{3}\cdot\frac{27}{8}-6\cdot\frac{9}{4}+9\cdot\frac{3}{2}\right)$$

$$V=\pi\left(\frac{9}{2}-\frac{27}{2}+\frac{27}{2}\right)$$

$$V=\frac{9}{2}\pi$$

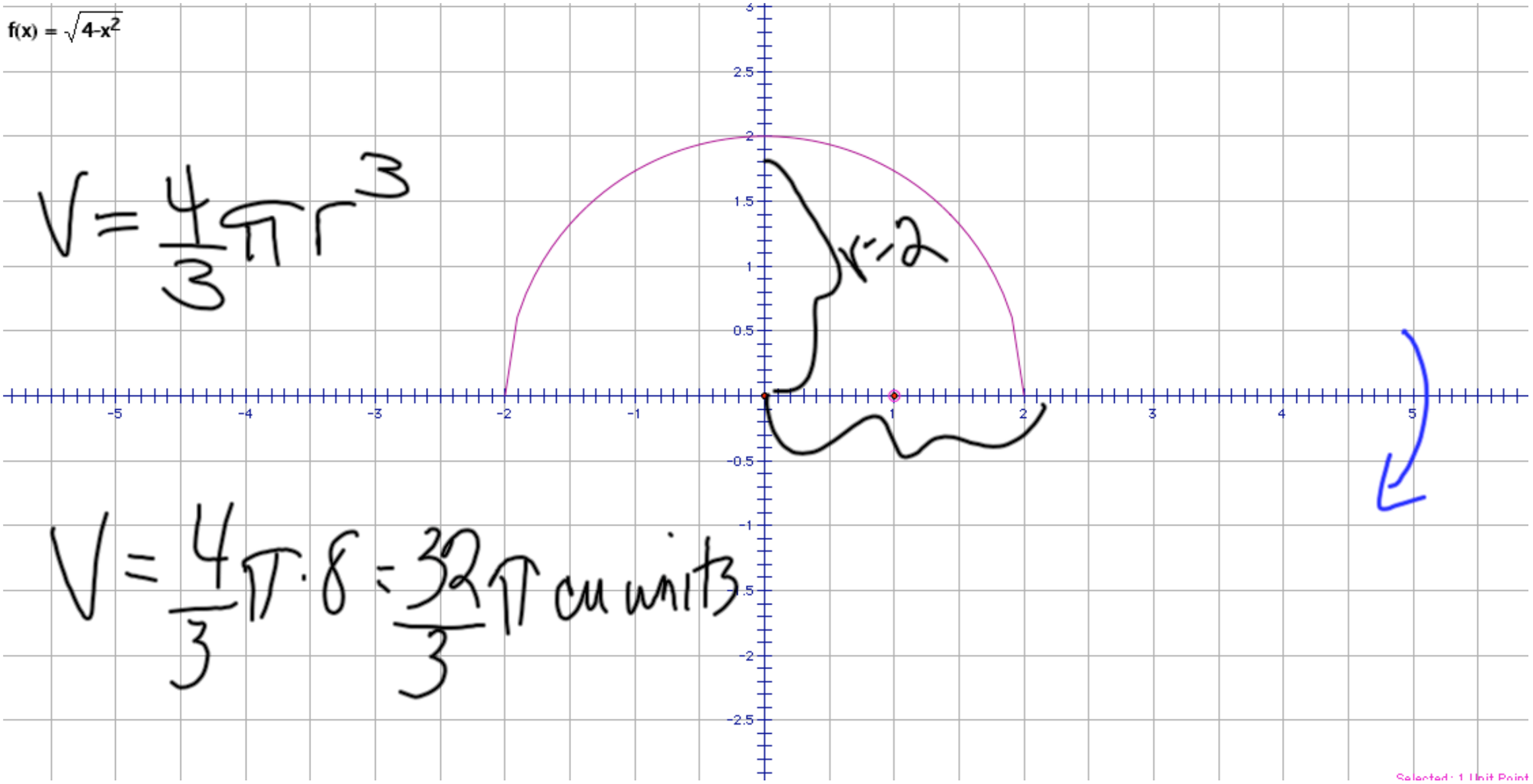
$$A(x) = \pi r^2$$

$$A = \pi \cdot (x^2)^2 = \pi x^4$$

$$V = \int_a^b A(x)\,dx$$

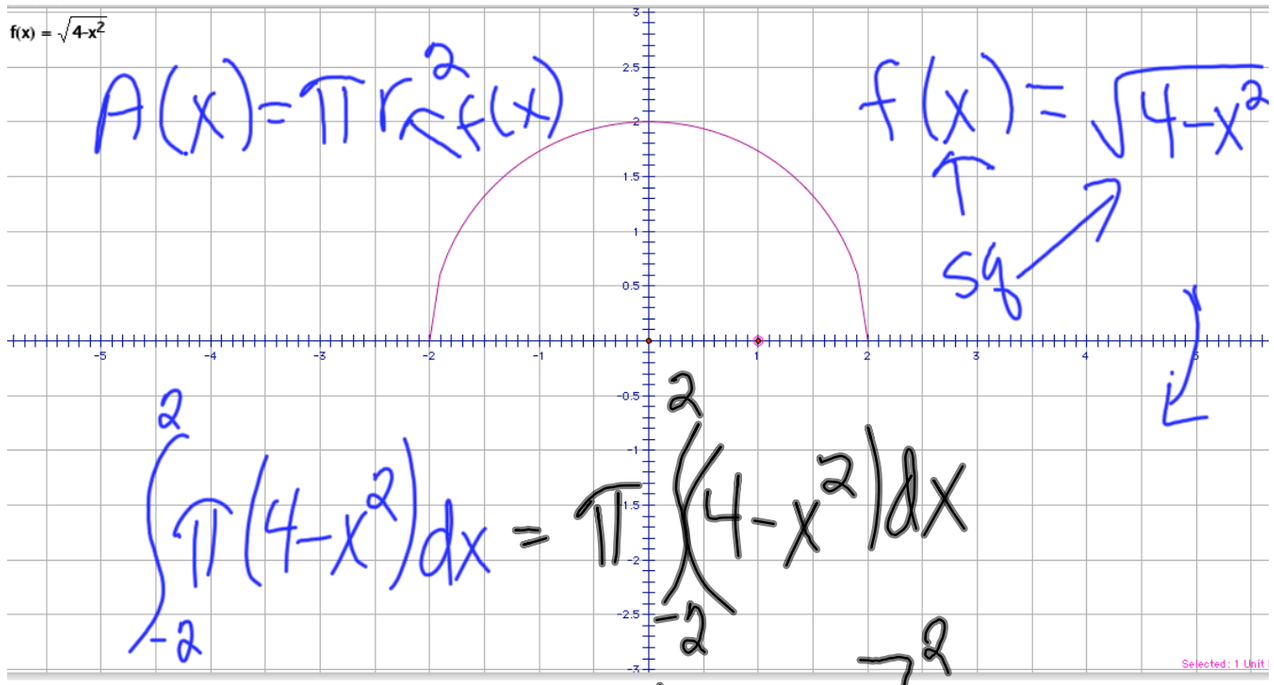
$$V = \int_0^2 \pi x^4\,dx = \pi \left(\frac{x^5}{5} \right)_0^2 = \pi \left(\frac{x^5}{5} \right)_0^2$$

$$\frac{32}{5}\pi \text{ cu units}$$



$$V = \frac{4}{3}\pi r^3$$

$$V = \frac{4}{3}\pi \cdot 8 = \frac{32}{3}\pi \text{ cu units}$$



$A(x) = \pi r^2 \leftarrow f(x)$

$f(x) = \sqrt{4-x^2}$

sq

$$\int_{-2}^{2} \pi(4-x^2)\,dx = \pi \int_{-2}^{2} (4-x^2)\,dx$$

$$\pi\left(4x - \frac{x^3}{3}\right)\Big]_{-2}^{2} =$$

$$\pi\left[\left(8 - \frac{8}{3}\right) - \left(-8 + \frac{8}{3}\right)\right]$$

$$\pi\left[16 + \frac{-16}{3}\right]$$

$$\pi\left[\frac{48}{3} - \frac{16}{3}\right] = \frac{32}{3}\pi$$

units

$$\int_a^b A(x)\,dx$$

$$A(x) = \pi r^2$$

$$A(x) = \pi [f(x)]^2$$